

5 We Claim:

1. Expanding clamping chuck having a base body (2), a
thin-walled expansion sleeve (4) which is provided
on an axial end portion of the base body (2) and
forms a central receptacle (5) for a work piece that
10 is to be clamped, and a tension ring (5) that
surrounds the expansion sleeve (4) forming an
annular pressure chamber (7) therebetween and is
connected to the base body (2) by screwing, wherein
the pressure chamber (7) is filled with a hydraulic
15 medium (11) and the expansion sleeve (4) can be
elastically deformed in order to fix a work piece in
the receptacle (5) by turning the tension ring (6)
relative to the base body (2) in order to axially
displace it, thereby reducing the volume of the
20 pressure chamber (7), characterized in that the
pressure chamber (7) is filled with an elastic solid
body (11) as the hydraulic medium and a sliding ring
element (12) is provided between the elastic solid
body (11) and a pressure face (6a) of the tension
25 ring (6) in order to transfer a pressing force from
the tension ring (6) to the solid body (11).
2. Expanding clamping device with a base body (2), a
thin-walled expansion sleeve (4) which is provided
30 on an axial end portion of the base body (2) and a
tension ring (6), which engages the expansion
sleeves (4) forming an annular pressure chamber (7)
therebetween and is connected to the base body (2)
by screwing, wherein the pressure chamber (7) is
35 filled with a hydraulic medium (11) and the

5 expansion sleeve (4) can be elastically deformed in
order to fix a work piece in the receptacle (5) by
turning the tension ring (6) relative to the base
body (2) in order to axially displace it, thereby
reducing the volume of the pressure chamber (7),
10 characterized in that the pressure chamber (7) is
filled with an elastic solid body (11) as the
hydraulic medium and a sliding ring element (12) is
provided between the elastic solid body (11) and a
pressure face (6a) of the tension ring (6) in order
15 to transfer a pressing force from the tension ring
(6) to the solid body (11).

3. Expanding clamping device according to claim 1 or 2,
characterized in that the solid body (11) comprises
20 several adjacently disposed ring elements (11a, 11b,
11c, 11d).

4. Expanding clamping device according to any
preceeding claim, characterized in that the pressure
25 chamber (7) has an essentially constant inner and/or
outer diameter.